

WHAT IS CLAIMED IS:

1. A method for distributing data packages across a network, the network featuring an external server for serving at least one data package, the external server being a dedicated server, the steps of the method being performed by a data processor, the method comprising the steps of:

- (a) providing a plurality of peer clients attached to the network and providing a list of data packages, said data packages being stored by each of said plurality of peer clients, each data package of said data packages having an entry in said list, said entry indicating a unique identifier for said data package and a location of said data package in at least one of said plurality of peer clients;
- (b) examining said list of data packages by a first peer client to find an entry for a required data package; and
- (c) if said entry for said data package is present on said list of data packages of said first peer client, retrieving said data package from said location at another of said plurality of peer clients according to said entry for said data package.

2. The method of claim 1, wherein said list of data packages is stored on the external server.

3. The method of claim 1, wherein said list of data packages is stored on at least said first peer client.

4. The method of claim 3, wherein alternatively said entry for said data package is absent from said list of data packages of said first peer client, the method further comprising

the steps of:

- (d) sending a request message for said data package by said first peer client to at least one other peer client; and
- (e) if a response message is received by said first peer client from said at least one other peer client, retrieving said data package from said at least one other peer client by said first peer client.

5. The method of claim 4, the method further comprising the step of:

- (f) altering said list of data packages being stored by at least said first peer client for indicating said location of said data package according to said response message.

6. The method of claim 5, wherein said request message and said response message are transmitted to said plurality of peer clients by broadcasting.

7. The method of claim 5, wherein said request message and said response message are transmitted to said plurality of peer clients by multicasting.

8. The method of claim 5, wherein said request message and said response message are transmitted to said plurality of peer clients by polling each peer client individually.

9. The method of claim 5, wherein if said response message is not received from said at least one other peer client by said first peer client, the method further comprises the

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step of:

- (g) obtaining said data package by said first peer client from the external server.

10. The method of claim 9, further comprising the step of sending a response  
5 message by said first peer client to said at least one other peer client substantially before said  
first peer client obtains said data package from the external server.

11. The method of claim 10, wherein said list of data packages is stored on each of  
said plurality of peer clients, the method further comprising the steps of:

- (h) receiving said response message from said first peer client by said at least one  
other peer client; and
- (i) altering said list of data packages being stored by said at least one other peer  
client for indicating said location of said data package according to said  
response message.

12. The method of claim 10, wherein said list of data packages is stored on each of  
said plurality of peer clients, the method further comprising the steps of:

- (h) receiving said response message from said first peer client by said at least one  
other peer client; and
- (i) altering said list of data packages being stored by said at least one other peer  
client for indicating said location of said data package according to a  
probabilistic function.

13. The method of claim 1, wherein said probabilistic function is performed

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according to a set of equations:

New location =

$$\left\{ \begin{array}{ll} \text{Old location} & P_o(x) = 1/(\text{generation}+1) \\ \text{New location} & P_n(x) = 1-1/(\text{generation}+1) \end{array} \right.$$

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wherein  $P_n(x)$  is a probability that said new location is substituted for said old location,  $P_o(x)$  is a probability that said old location is retained, and "generation" indicates how many times said location had been previously changed.

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14. The method of claim 10, further comprising the steps of:

- (h) receiving said response message from said first peer client by said at least one other peer client; and
- (i) retrieving said data package from said first peer client by said at least one other peer client substantially after said first peer client has obtained said data package.

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15. The method of claim 1, wherein an upper limit is predetermined for a number of said plurality of peer clients served substantially simultaneously by said at least one other peer client, such that if a number of said plurality of peer clients served substantially simultaneously by said at least one other peer client is greater than said upper limit, the method further comprises the step of:

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- (d) sending a busy message from said at least one other peer client to said first peer client.

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16. The method of claim 1, wherein the external server is a Web server, and said plurality of peer clients is a plurality of Web browsers.

17. The method of claim 1, wherein the external server is a BackWeb™ server,  
5 and said plurality of peer clients is a plurality of BackWeb™ clients.

18. The method of claim 1, wherein said unique identifier for said data package is an MD5 digest of said data package.

10 19. The method of claim 1, wherein the step of retrieving said data package is performed according to a protocol based on TCP/IP.

20. The method of claim 19, wherein said protocol is HTTP.

15 21. The method of claim 19, wherein said protocol is FTP.

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